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MEMORIAL

TO THE

UNITED STATES GOVERNMENT

FOR THE ERECTION OF A

NATIONAL ARMORY,

AT

BRIGHTON, PA.

ON THE

FALLS OF THE BEAVER RIVER.

"The original supply of warlike materials with which a nation begins hostilities, can last but a little time: and the great care of every wise ruler has been to make his *Country independent* in the means of attack and defence."—NAPOLEON.

PRINTED BY BAER & MYERS, CORNER FIFTH & WOOD STREETS, PITTSBURGH.

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PITTSBURGH:
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1861.

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Nov. 15, 1940

NATIONAL ARMORY.

MEMORIAL.

To the Honorable, the Secretary of War, and Members of the Senate and House of Representatives of the Congress of the United States.

WHEREAS, a new Armory, or Armories, for the manufacture of all arms and munitions of war, has become a national necessity, and you will feel called upon at your present sitting to take order for the establishment of one or more such works:

We respectfully ask leave to call your attention to the Falls of Big Beaver River, in Beaver County, Pennsylvania, as a site for, and in all respects most admirably suited by nature and art for such National Works. As early as the year 1825, this site attracted the attention of our Government for the erection of a Western Armory, and was carefully examined and reported upon by Cols. M'Rea, Lee and Talcott, Commissioners appointed by the War Department, which report is now on file in that office, and will show how it was at that day appreciated for such a work; and that upon a careful measurement of the volume of water passing over the Falls in a dry season of a dry year they found it could be counted upon for cubic feet per minute, in the lowest stage of water. The property then examined by them can yet be had for this purpose, in whole or in part, and in all respects much improved. Two substantial dams have since been built across the Beaver, by which two falls of more than twenty feet

(20 feet) each may be used, or a fall of forty feet may be taken from one and used, if preferred. Canal, lock and races have been made upon the property, and all ready for the application of the power to machinery at one or both dams, and many erections, dwellings, &c., built, and suitable for works and the accommodation of officers and workmen. Since that time a canal to Erie, Pennsylvania, has been made, and one also to Cleveland, Ohio, passing into the Beaver, the waters of French Creek and Conneaut Lake, Pennsylvania, and of the Cuyahoga and Feeder Lakes of Ohio, and thus adding to the volume of water in the Beaver. Since then many beds of superior Bituminous Coal and Iron Ore have been discovered, opened and worked upon and in the immediate vicinity of this site; and now the transportation of coal, pig and wrought iron, mined and manufactured near to, and north and west of it, over the canals and railroads, has assumed large proportions; much of this coal going to New York City. The coal upon and near to this site is proved to be of superior quality for smelting iron, for smiths and manufacturing uses, and lies convenient to railroad and canal, and for use in the shops and works. Since then we have great and unusual facilities by railroad to all points. The navigation of the Ohio River has been much improved, and up which, large amounts of pig iron pass the mouth of Beaver, to Pittsburgh. Large amounts of pig iron, Lake Superior copper and iron ore, &c., pass the Falls by railroad and canal to Pittsburgh. Coal, from mines on this property, now opened, can be had for all uses, of a superior quality, for an Armory of large and small guns, &c., at less cost per ton, and of at least equal quality to any to be had at any other point. Brick and fire clays, sand stone, lime stone, and all building materials are abundant, and of the best quality, upon this property. Provisions are cheap, and the country remarkably healthy. The country near, and north and west, furnishes abundance of superior oak, walnut, poplar and cherry lumber, at low prices. Our position to Pittsburgh is so distant as to shut out from such works here the evils incident to all large cities—and yet so near—being only about one hours' time by rail—as to command for an Armory here all the real advantages which belong to it for such a work,

and to make this point virtually a suburb of that city. Her artizans and workmen would prefer living here.

Upon examination you will agree with us, we think, that the National Interests will be best advanced by selecting this site for a National Armory, where is at command the *cheapest water power*, and *steam power also cheaper than elsewhere.*

This we hope you will do, and "we will ever," &c.

DANIEL AGNEW, *Chairman*,
THOMAS CUNNINGHAM,
WILLIAM HENRY,
BENJAMIN WILDE,
SILAS MERRICK,
R. P. ROBERTS,
JOHN ALLISON,
B. B. CHAMBERLIN,
A. ROBERTSON,
JAMES PATTERSON,

Joint Committee appointed by the County Committee of Safety, and by a general County Meeting,

Beaver County, Pennsylvania, July 4th, 1861.

EXTRACTS

From the Report made to the Government by Commissioners, Cols. M'Rea and Lee, and Major Talcott, in 1825, *after a minute examination of many places for a site for a Western National Armory.*

"The description given of the position on Big Beaver, Pa., (Brighton,) leaves but little to say on the character of its water power. The perfect command of the water at all times; the convenient manner of applying it to the wheels, which the fall there allows; its entire freedom from interruption by droughts or freshets, and the security it offers, to the whole establishment of an Armory, from the dam to the last workshop, give it decided advantages in those respects over any other water power that has been examined, with the single exception of that of Ohio pile. It has a further advantage over Zanesville, viz: economy in first cost, and subsequent armorial expenses, and healthfulness of position. Comparing it with Ohio pile, it is apparent that the advantages which would accrue to the Armory from its position on the Ohio river, from its vicinity to, and consequent *command of the resources afforded by Pittsburgh* more than compensate for the additional cost of its water power." "It is more than probable that the (Beaver) river at Brighton will afford, at its lowest stage, at least twice the power that is required for an Armory, without resorting to any portion of the fall which is below the level of high water, except for the forge." "To make the power, as it ought to be, subservient to the most advantageous arrangement of the work, will require the use of at least four steam engines, or water-wheels, in all cases." "The healthfulness of the country around Pitts-

burgh, and its constant command of all the materials and labor that are either permanently or occasionally required at an Armory, leave no room for any unfavorable anticipations in those respects. But its most essential advantages is in its manufacturing establishments, and other resources, which would secure the Government, in case of emergency, the means of promptly extending the operations of an Armory to the production of almost any required number of arms; and in all material respects the position of Beaver is considered as *commanding the resources of Pittsburgh.*"

The Commissioners appointed in 1841, by Government, again to examine and report upon different situations for a site for a National Armory, reported in 1842, that the water power, as reported by the previous Board of Commissioners in 1825, was underestimated, "probably 50 per cent. less than the minimum supply of the river; in regard to the sufficiency of the power obtained —for all purposes to which it is applicable in an Armory, there can be no doubt, even were the work extended to the fabrication of twenty, or even thirty thousand muskets annually."

"The advantages and facilities here presented for trade and intercourse with remote parts of the country, added to the salubrity of situation and climate here enjoyed, contribute to render the site one of the most desirable places for carrying on business operations, of almost every variety, anywhere to be met with in the valley of the Ohio or Mississippi."

EXTRACT FROM THE REPORT OF 1825.

"By a comparison of the cost of materials and fuel, in the manfacture of the musket, at Springfield, Mass., and the probable cost at Beaver, we are satisfied that it may be manufactured at Beaver or Pittsburgh for more than fifty cents less than at Springfield, in 1823; in which year the musket cost less than at any former period."

NOTES.

The comparison of cost of materials and fuel in the manufacture of the musket at Springfield, Mass., and the cost at Beaver, will prove at this time much more in favor of Brighton and against

Springfield than it was in 1823 or 1825. Provisions and labor are also much lower in Beaver than at Springfield, and so of real estate.

NOTE.

It will be observed that both Boards of Commissioners based their estimates of the power at Brighton upon *their minimum* estimates of the water in the Beaver. It is well known that for eight or nine months every year the water power of the Beaver is at *least* ten times greater than the "minimum."

ESTIMATE OF STEAM POWER AS COMPARED WITH WATER POWER.

To show the comparative economy of steam power and water power—doing the same work,—we give below some facts of an official character, the truth of which cannot be questioned; and some calculations and comparisons of the same which will prove interesting, and to which no exceptions can be taken.

The city of Philadelphia is supplied with water by some four distinct Water Works, the chief of which are Fairmount Water Works, by water power, and the Schuylkill and the Delaware Water Works by steam power—anthracite coal being the fuel used.

The city of Pittsburgh is supplied with water by steam power, and so also is the city of Allegheny—their fuel being bituminous coal.

From the published reports made last year by the Superintendents of those Works to their respective city authorities are derived the facts as stated; and from the same some comparisons and estimates are made worthy of note.

At Fairmount Water Works, Philadelphia, 1860, the cost of raising 1,000,000 gallons of water one foot high, by water power, was, not including repairs or interest upon first cost of machinery, &c., nine one hundredths of one cent, (009.)

There was raised in the reservoirs, 95 and 111 feet high, 3,390,271,757 gallons of water, which yielded the city a revenue of two hundred and sixty thousand two hundred and sixty-five dollars, ($260,265.)

The actual current running expenses for raising this water, yielding this large revenue, was two thousand nine hundred and forty-nine dollars and twenty-seven cents, *including pumps*, ($2,949,27,)—being about *one ninetieth* of the revenue.

At Pittsburgh City Water Works, *steam power*, 1860, the cost of raising 1,000,000 gallons of water, one foot high, by *steam power*, was at the *Lower Works*, not including repairs or interest upon first cost, *six cents* and *three mills*, (6 cents and 3 mills.)

At the "Upper Works" the cost of raising 1,000,000 gallons of water one foot high was *seven cents* and *six mills*, (7 *cents* and 6 *mills*,) *and over.*

Pittsburgh City Water Works, *Three Steam Engines*, raised last year, 1860, 1,360,134,383 gallons of water, at a current running expense of $18,023,81, and from which the city derived a revenue of $71,145,34. The actual current running expense of raising the water from which was derived this amount of revenue was $17,551,10. About *one-fourth* the amount of revenue.

At Allegheny City Water Works, *steam power*, 1860, the cost of raising 1,000,000 gallons of water one foot high was, not including repairs or interest on first cost, *seven cents* and *six mills*, nearly, (7 *cents* and 6 *mills.*)

The "assessment" of water in this city, for 1860, was $43,796,71. The actual current running cost of raising the water $4,309,51—being about *one-tenth* of the "assessment."

The actual current running cost of raising the water for Pittsburgh and Allegheny cities—*Four Steam Engines*—about *one-half time*, was $22,333,32; which at six per cent. per annum is the interest upon $372,200.

The actual current running cost of raising 3,390,271,757 gallons water, by *water power*, at Fairmount, for 1860, was, *including pumps*, $2,949,27.

The cost of raising this *same amount* of water the *same heighth*, say only 105 feet, at the cost of raising 1,000,000 gallons at Pittsburgh and Allegheny, by *steam power* would be $27,054, making a *difference* between the cost of steam and water power in raising the *same amount* of *water* an *equal heighth*, of $24,105; and that while the engines were working *half the time, or little more;* the

difference in the cost of the same work being the interest, at 6 per cent. per annum, upon more than $400,000.

At Philadelphia Delaware Water Works, *steam power*, the cost of raising 1,000,000 gallons of water one foot high, 1860, was, not including repairs or interest on first cost, *eleven cents* and *eight mills*, (11 cents and 8 mills.)

At Philadelphia Schuylkill Water Works, *steam power*, the cost of raising 1,000,000 gallons of water one foot high, 1860, was, not including repairs or interest on first cost, *eight cents and two-tenths* (8 cents and 2 mills.)

The actual running current expenses of raising 115 feet high, 2,643,736,620 gallons of water, and which gave a revenue of $174,319, was, for 1860, $21,381,40. A little more than one-eighth of the revenue.

The difference being $24,105 in favor of water power at Fairmount, Philadelphia, and against steam power at Pittsburgh, (and *is much greater between* the *water power* and *steam power at Philadelphia*, in raising the same amount of water the same distance,) and would be an additional cost of two dollars per gun if only 12,000 guns were made a year, or of one dollar per gun greater cost if 24,000 guns a year were made.

The cost of coal consumed at the "Upper Works" of the Pittsburgh Water Works was last year a fraction more than *four cents* per bushel.

The cost of coal consumed at the Lower Works was for same time per bushel four cents 57-100, (4 cents 5.7 mills.)

The cost of the fuel consumed at the "Allegheny City Water Works," *called "slack,"* was, in same time, *two cents* 87-100 per bushel.

The cost of coal to the Government at the Arsenal at Pittsburgh is *four and three-quarter cents.*

The water power at Fairmount worked night and day.

The Pittsburgh steam engines worked about twelve and a half hours—little more than half time. Allegheny City the same.

Remark that running water power night and day adds no more to the cost than if working half time, while you *double* the cost by so working the steam engines.

Remark, also, that included in the current running expenses of $2,949,27, charged to power at Fairmount, is the attention to, and expense of keeping in order, oil for, &c., of the pumps, which in an Armory would not occur, and would much reduce the simple current running expenses of water power alone.

NOTE.

The cost of coal at Brighton would be simply the sum paid the miner for digging. The slack or sleck would cost *nothing*.

In the Springfield *Republican*, of July 12th last, was a labored paper upon the subject of the supply of our Government with arms, in which, while admitting that the Armory at that place cannot be made to supply the necessary wants of the nation, it argues against another National Armory being erected, and that the Armory there and *private contractors* shall be solely relied upon for this necessary requirement of Government, and this too while showing that the "rebellion found our Arsenals depleted of our previous large stock of arms, and that whether this war be long or short the Government must enlarge its manufactory of arms until it can not only arm its soldiers with the best description of arms known to civilization, but lay up a large reserve store for such other emergencies in the future as that now upon us," it asks, "how shall the immediate necessity and the permanent want of arms be supplied," and answers "by the greatest possible enlargement of the Armory at Springfield and by private contractors!" While urging this dependence of our Government for this so great National necessity, it goes on to show that arms from contractors cost us nearly or quite *double* the cost of such as are made at our Armory; and that after the uttermost forcing of the Armory at Springfield it could be made to do little if any more that make up for the ordinary *loss*, while in service, from wear and tear ; leaving us entirely dependent upon contractors for arming our people and stocking our Arsenals, and this too while showing that contractors would mainly have to depend upon *foreign* manufactories to fill their contracts!

While fully agreeing with the Springfield *Republican* that our Government will realize the imperative necessity of providing for

the arming of our people and stocking our Arsenals with a much larger supply and reserve store than was ever before thought necessary, and that too whether counting on war or peace, we yet cannot agree that our Government will consent to depend upon foreign workshops or upon *one only Armory* in *one corner of the Republic* for this great and most important "want." We confidentlv believe that our Government will determine that our arms shall be made at home, within our own borders, and keep the large expenditure of labor and money necessarily required for this purpose among ourselves, avoiding the risks and dangers of the ocean, &c. That in pursuance of this resolve Government will direct a Commission of competent, disinterested persons having its full confidence to examine and select one or more sites for an Armory, or Armories, West of the Allegheny Mountains, where arms can in all respects, geographically, economically, in transportation, safe keeping, &c., be made so as most to conduce to the interests of the Government and people ; and there, upon such site or sites, erect an Armory, or Armories, *sufficient* to arm our people and store our Arsenals with arms known to our Government to be of the best fashion, material and workmanship ; and *all* under the independent control and management of Government itself.

We respectfully urge that the Falls of Beaver, at Brighton, Beaver county, Penn'a, presents to Goverment a site for a National Armory, which in every respect possesses the properties desirable for such a work. It has been twice examined and most favorably reported upon by two Boards of Commissioners appointed by the War Department for this purpose ; one of which reported in 1825, (see extracts herewith,) that muskets could be made at Brighton or Pittsburgh for fifty cents each less than the lowest cost any were ever made at the Armory at Springfield. Add to this difference the cost of transportation from Springfield to Pittsburgh, and it will be largely increased, and would make a large sum annually upon all the muskets required—in all time—for the West. The labor and all the materials entering into the manufacture of arms are at this site in great abundance at the lowest cost. Water power great and constant ; every facility for cheap and rapid transportation, at least equal to the *most favored* point.

A very little expense of time and money would enable Government to turn out at this site a large supply of arms by simply putting into operation the finishing machinery, and giving out by contract to the neighboring workshops the parts of a musket to be made after patterns furnished them, which are to be finished and put together in the Armory. By this means large quantities could be turned out, and in the meantime the machinery and works could be finished and enlarged as desired.

All the National Ship Building and Navy Yards, all the Armories and National Foundries are and have been at the East; all the large sums of money expended upon our large Marine service and Coast defences are and have been disbursed in the East; and we respectfully urge that arms required for use in that part of the Republic lying West of the Alleghenies should be made here, where they can be made as well and at *less cost*; kept safely, distributed at less cost of time and money, and at less risk; giving employment to our own people and keeping the money in our own country—in a word more to the benefit of our Government, and more equally distributing the benefits of labor, &c., among our people.

NOTE.—Attention is respectfully called to the annexed Map, which is as accurately drawn, as to distances and positions, as could be done in copying from larger Maps without the use of a scale.

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